

REMARKS

Favorable reconsideration is respectfully requested.

The claims are 1 to 4.

Claims 1 to 4 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan et al. in view of NCI-Antioxidant Cancer Prevention, for the reasons of record, and further in view of Buchter-Larsen et al. (U.S. 6,914,175), newly cited.

This rejection is respectfully traversed.

Morgan et al. state that the "Ascopyrone P is known to function as a good antioxidant and antimicrobial agent."

However, Morgan et al. fail to disclose or suggest the antitumor function of Ascopyrone P.

NCI-Antioxidant Cancer Prevention: Fact Sheet (1-08-2003) discloses that cancer is induced by the attack of a normal cell by free radicals and that the erasure of the free radicals by an antioxidant prevents the canceration of the normal cell. However, this reference is silent about the effect of treating cancer.

At present, the number of antioxidants which show an antitumor effect by themselves is limited and it is known that most antioxidants do not show an antitumor effect. This is apparent from applicants' experimental data (please refer to Materials 2 and 3 of record).

The administration of an antioxidant to a cancer patient is intended to suppress the side effects of an anticancer drug and it is well known that an antioxidant is not administered per se as an anticancer drug.

It has been confirmed from applicants' experimental data that APP has an antioxidant effect and also an antitumor effect by itself (see Materials 2 and 3 of record).

Buchter-Larsen et al. (U.S. 6,914,175) disclose in column 4, lines 5 to 10 what the Examiner states.

However, this reference merely suggests "preventing or suppressing cancer formation" and fails to disclose a cancer treatment function, that is, a cell killing effect which acts on a cancer cell directly.

APP used in the present invention exhibits a cell killing effect for cancer cells directly as Dr. K. Abeyama states in his Rule 132 Declaration enclosed herewith and as described in Materials 2 and 3 of record.

Dr. Abeyama, who is one of the present inventors, an associate professor at Kagoshima University, a doctor of medicine and a medical doctor in this Declaration states that an antioxidant having an anticancer effect does not have a cell killing effect for cancer cells directly whereas APP used in the present invention has an apoptosis induction effect for cancer cells and exhibits a cell killing effect for cancer cells directly.

In the Final Rejection, it is stated that applicants have not provided any evidence or reference to support their assertion that it is rare that an antioxidant functions as an antitumor agent and that the effect of the present invention i.e. that APP, known as an antioxidant, has an antitumor effect, is not obvious. However, such evidence is submitted herewith via the above Declaration. It is such property which makes APP useful for direct treatment of cancer as opposed to prevention of cancer via an antioxidant effect.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

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